Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2019-09-26-71** **Date: 19-07-2019**
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Sub Division, BBMP, Bangalore.
Project Name	:	Construction of Compound Wall and Other Works to DWCC in Ward No:01 of Yelahanka Sub Division.
Agency	:	Sri.Krishna S, No:35 K H B Main Road, 'A' Block Kaveri Nagar, Bangalore.
Customer's Reference	:	EE(YNK.D)E-PMT-01/W.O/67/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	16-07-2019
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	17-07-2019
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

A&I
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Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	1.08	–
2	Finess by Air permeablity method (m^2/kg,Min)	298.5	225m^2/kg, Min
3	Density (gm/cc)	3.11	–
4	Standard Consistency (%)	29.5%	Not specified
5	Initial Setting time	155 minutes	Not less than 30 minutes
6	Final Setting time	260 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.5mm	Not more than 10 mm

Note:

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

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Technical Manager

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Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2019-09-26-71** **Date: 14-08-2019**
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Sub Division, BBMP, Bangalore.
Project Name	:	Construction of Compound Wall and Other Works to DWCC in Ward No:01 of Yelahanka Sub Division.
Agency	:	Sri.Krishna S, No:35 K H B Main Road, 'A' Block Kaveri Nagar, Bangalore.
Customer's Reference	:	EE(YNK.D)E-PMT-01/W.O/67/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	16-07-2019
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	17-07-2019
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

AE-1
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Compressive Strength			
Sl.No.	**Physical properties**	**Results**	**Requirement as per IS 12269: 2013**
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	58.5N/mm^2	Not less than 53 N/mm^2

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Technical Manager

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2019-09-26-71** **Date: 19-07-2019**
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Sub Division, BBMP, Bangalore.
Project Name	:	Construction of Compound Wall and Other Works to DWCC in Ward No:01 of Yelahanka Sub Division.
Agency	:	Sri.Krishna S, No:35 K H B Main Road, 'A' Block Kaveri Nagar, Bangalore.
Customer's Reference	:	EE(YNK.D)E-PMT-01/W.O/67/2019-20
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	16-07-2019
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	16-07-2019

A.E.E

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	188	188	1.3	98.7	90-100
3	20 mm	7285	7473	49.8	50.2	30-70
4	10 mm	4090	11563	77.1	22.9	10-35
5	4.75 mm	3001	14564	97.1	2.9	0-5
6	Pan	436	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2019-09-26-71** **Date: 19-07-2019**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	11.5	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.8	
3	Specific Gravity	2.66	–
4	Bulk Density(Loose) (Kg/l)	1.42	–
5	Bulk Density(Compacted) (Kg/l)	1.48	–
6	Water Absorption(%)	0.22	–

A.E.E

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2019-09-26-71** **Date: 18-07-2019**
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Sub Division, BBMP, Bangalore.
Project Name	:	Construction of Compound Wall and Other Works to DWCC in Ward No:01 of Yelahanka Sub Division.
Agency	:	Sri.Krishna S, No:35 K H B Main Road, 'A' Block Kaveri Nagar, Bangalore.
Customer Reference	:	EE(YNK.D)E-PMT-01/W.O/67/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	16-07-2019
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	16-07-2019

AE-1
A.E.E

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	199	199	4.0	96.0	90-100
3	10 mm	3053	3252	65.0	35.0	25-55
4	4.75 mm	1499	4751	95.0	5.0	0-10
5	Pan	249	5000	100	0	-

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2019-09-26-71** **Date: 18-07-2019**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	11.4	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.7	
3	Specific Gravity	2.62	–
4	Bulk Density(Loose) (Kg/l)	1.48	–
5	Bulk Density(Compacted) (Kg/l)	1.55	–
6	Water Absorption(%)	0.27	–
7	Aggregate crushing Value(%)	23.9	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	23.1	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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Technical Manager

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Format No: CP/TF/01

TEST REPORT OF FINE AGGREGATE

Lab ID	:	**CP-2019-09-26-71** **Date: 18-07-2019**
Customer	:	Assistant Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
Address	:	Yelahanka Sub Division, BBMP, Bangalore.
Project Name	:	Construction of Compound Wall and Other Works to DWCC in Ward No:01 of Yelahanka Sub Division.
Agency	:	Sri.Krishna S, No:35 K H B Main Road, 'A' Block Kaveri Nagar, Bangalore.
Customer's Reference	:	EE(YNK.D)E-PMT-01/W.O/67/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	16-07-2019
Sample Type	:	Fine Aggregate
Reference to BIS codes	:	IS 383 : 2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	16-07-2019
Total weight taken	:	1000 grams

AE-1
A.E.E

Sl.No	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	27	27	2.7	97.3	90-100	90-100	90-100	95-100
3	2.36 mm	55	82	8.2	91.8	60-95	75-100	85-100	95-100
4	1.18 mm	239	321	32.1	67.9	30-70	55-90	75-100	90-100
5	600 micron	205	526	52.6	47.4	15-34	35-59	60-79	80-100
6	300 micron	203	729	72.9	27.1	5-20	8-30	12-40	15-50
7	150 micron	191	920	92.0	8.0	0-10	0-10	0-10	0-15
8	Pan	80	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2019-09-26-71**

Date: 18-07-2019

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.5	–
2	Specific Gravity	2.59	–
3	Material finer than 75 micron(%)	6.9	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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